Figure 1 1/10

```
  1 FPTIPLSRLF DNASLRAHRL HQLAFDTYQE FEEAYIPKEQ KYSFLQNPQT

 51 SLCFSESIPT PSNREETQQK SNLELLRISL LLIQSWLEPV QFLRSVFANS

101 LVYGASDSNV YDLLK   DLEEGIQ   TLMGRLED GSPRTGQIFK QTYSKFDTNS
                                   ^^^^^^^^

151 HNDDALLKNY GLLYCFRKDM DKVETFLRIV QCRSVEGSCG F
```

Figure 2 2/10

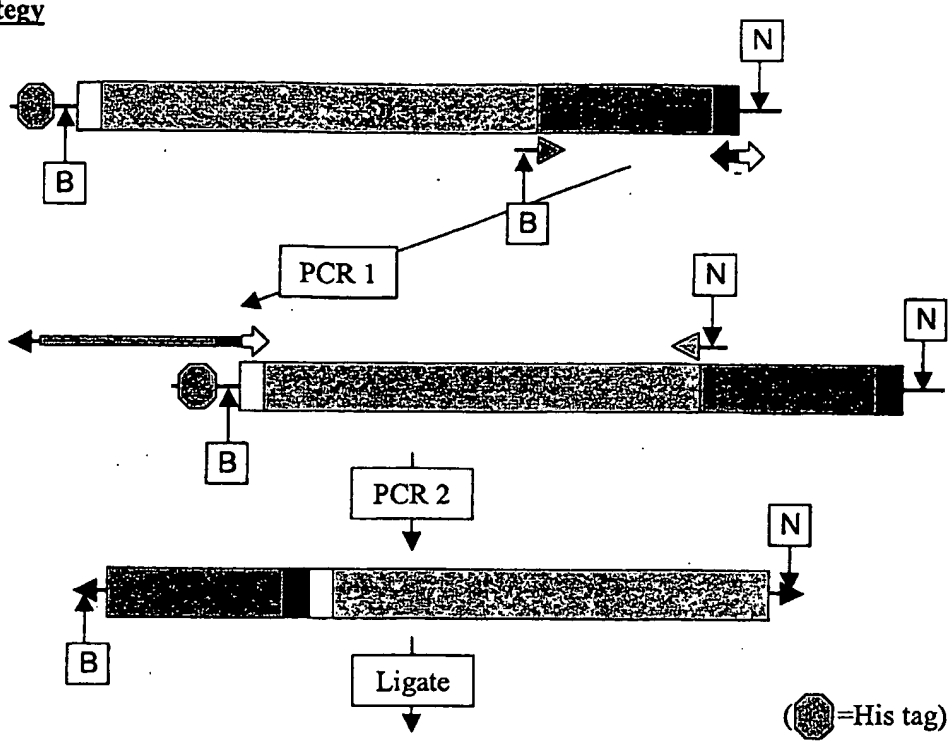
TTCCCAACCATTCCCTTATCCAGGCTTTTTGACAACGCTATGCTCCGCGCCCATCGTCTGCACCAGCTGGC
CTTTGACACCTACCAGGAGTTTGAAGAAGCCTATATCCCAAAGGAACAGAAGTATTCATTCCTGCAGAAC
CCCCAGACCTCCCTCTGTTTCTCAGAGTCTATTCCGACACCCTCCAACAGGGAGGAAACACAACAGAAAT
CCAACCTAGAGCTGCTCCGCATCTCCCTGCTGCTCATCCAGTCGTGGCTGGAGCCCGTGCAGTTCCTCAGG
AGTGTCTTCGCCAACAGCCTGGTGTACGGCGCCTCTGACAGCAACGTCTATGACCTCCTAAAGGACCTAG
AGGAAGGCATCCAAACGCTGATGGGGAGGCTGGAAGATGGCAGCCCCCGGACTGGGCAGATCTTCAAGC
AGACCTACAGCAAGTTCGACACAAACTCACACAACGATGACGCACTACTCAAGAACTACGGGCTGCTCTA
CTGCTTCAGGAAGGACATGGACAAGGTCGAGACATTCCTGCGCATCGTGCAGTGCCGCTCTGTGGAGGGC
AGCTGTGGCTTC

Figure 3

MDLWQLLLTLALAGSSDAFSGSEATAAILSRAPWSLQSVNPGLKTNSSKEPKFTKCRSPER
ETFSCHWTDEVHHGTKNLGPIQLFYTRRNTQEWTQEWKECPDYVSAGENSCYFNSSFTSI
WIPYCIKLTSNGGTVDEKCFSVDEIVQPDPPIALNWTLLNVSLTGIHADIQVRWEAPRNADI
QKGWMVLEYELQYKEVNETKWKMMDPILTTSVPVYSLKVDKEYEVRVRSKQRNSGNYG
EFSEVLYVTLPQMSQFTCEEDFYFPWLLIIIFGIFGLTVMLFVFLFSKQQRIKMLILPPVPVPK
IKGIDPDLLKEGKLEEVNTILAIHDSYKPEFHSDDSWVEFIELDIDEPDEKTEESDTDRLLSSD
HEKSHSNLGVKDGDSGRTSCCEPDILETDFNANDIHEGTSEVAQPQRLKGEADLLCLDQKN
QNNSPYHDACPATQQPSVIQAEKNKPQPLPTEGAESTHQAAHIQLSNPSSLSNIDFYAQVSD
ITPAGSVVLSPGQKNKAGMSQCDMHPEMVSLCQENFLMDNAYFCEADAKKCIPVAPHIKV
ESHIQPSLNQEDIYITTESLTTAAGRPGTGEHVPGSEMPVPDYTSIHIVQSPQGLILNATALPL
PDKEFLSSCGYVSTDQLNKIMP

Figure 4 4/10

Strategy

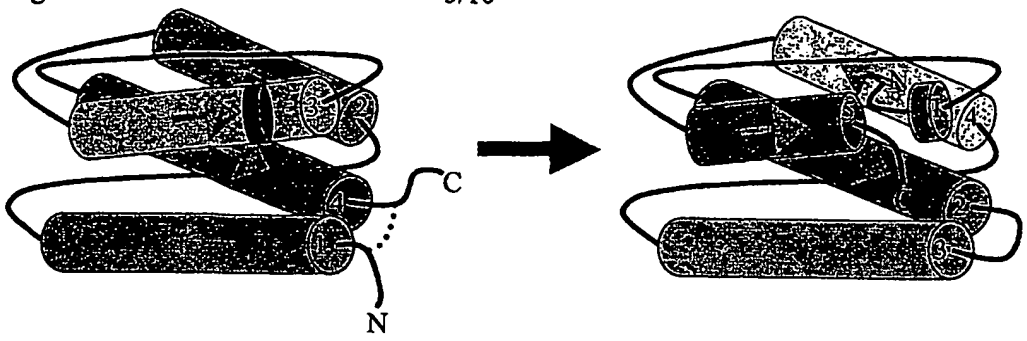


1) PCR1 with forward (GHPermN0x+) and reverse (GHPermL01-) primers.
2) Purify PCR product.
3) PCR2 with product from PCR1 and reverse primer (GHPermC0x-).
4) Purify PCR product.
5) Digest PCR product and suitable vector using *Bam*HI and *Not*I.
6) Ligate PCR product into vector.

Primer Pairs/PCRs

	First PCR		Second PCR	
	Forward	**Reverse**	**Forward**	**Reverse**
GHCP02	GHPermN01+	GHPermL01-	PCR1 product	GHPermC02-
GHCP03	GHPermN01+	GHPermL01-	PCR1 product	GHPermC03-
GHCP04	GHPermN04+	GHPermL01-	PCR1 product	GHPermC01-
GHCP05	GHPermN04+	GHPermL01-	PCR1 product	GHPermC02-
GHCP06	GHPermN06+	GHPermL01-	PCR1 product	GHPermC06-
GHCP07	GHPermN07+	GHPermL01-	PCR1 product	GHPermC07-

Figure 5



Growth Hormone

```
  1  TTCCCAACCATTCCCTTATCCAGGCTTTTTGACAACGCTAGTCTCCGCGC
 51  CCATCGTCTGCACCAGCTGGCCTTTGACACCTACCAGGAGTTTGAAGAAG
101  CCTATATCCCAAAGGAACAGAAGTATTCATTCCTGCAGAACCCCCAGACC
151  TCCCTCTGTTTCTCAGAGTCTATTCCGACACCCTCCAACAGGGAGGAAAC
201  ACAACAGAAATCCAACCTAGAGCTGCTCCGCATCTCCCTGCTGCTCATCC
251  AGTCGTGGCTGGAGCCCGTGCAGTTCCTCAGGAGTGTCTTCGCCAACAGC
301  CTGGTGTACGGCGCCTCTGACAGCAACGTCTATGACCTCCTAAAGGACCT
351  AGAGGAAGGCATCCAAACGCTGATGGGGAGGCTGGAAGATGGCAGCCCCC
401  GGACTGGGCAGATCTTCAAGCAGACCTACAGCAAGTTCGACACAAACTCA
451  CACAACGATGACGCACTACTCAAGAACTACGGGCTGCTCTACTGCTTCAG
501  GAAGGACATGGACAAGGTCGAGACATTCCTGCGCATCGTGCAGTGCCGCT
551  CTGTGGAGGGCAGCTGTGGCTTC
```

GH_CP01

```
  1  ATCCAAACGCTGATGGGGAGGCTGGAAGATGGCAGCCCCCGGACTGGGCA
 51  GATCTTCAAGCAGACCTACAGCAAGTTCGACACAAACTCACACAACGATG
101  ACGCACTACTCAAGAACTACGGGCTGCTCTACTGCTTCAGGAAGGACATG
151  GACAAGGTCGAGACATTCCTGCGCATCGTGCAGTGCCGCTCTGTGGAGGG
201  CAGCACCATTCCCTTATCCAGGCTTTTTGACAACGCTAGTCTCCGCGCCC
251  ATCGTCTGCACCAGCTGGCCTTTGACACCTACCAGGAGTTTGAAGAAGCC
301  TATATCCCAAAGGAACAGAAGTATTCATTCCTGCAGAACCCCCAGACCTC
351  CCTCTGTTTCTCAGAGTCTATTCCGACACCCTCCAACAGGGAGGAAACAC
401  AACAGAAATCCAACCTAGAGCTGCTCCGCATCTCCCTGCTGCTCATCCAG
451  TCGTGGCTGGAGCCCGTGCAGTTCCTCAGGAGTGTCTTCGCCAACAGCCT
501  GGTGTACGGCGCCTCTGACAGCAACGTCTATGACCTCCTAAAGGACCTAG
551  AG
```

Figure 6

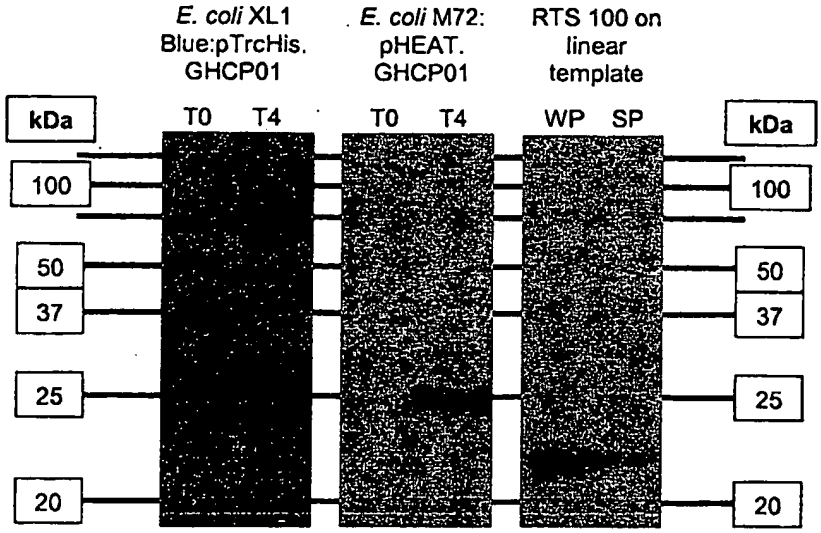
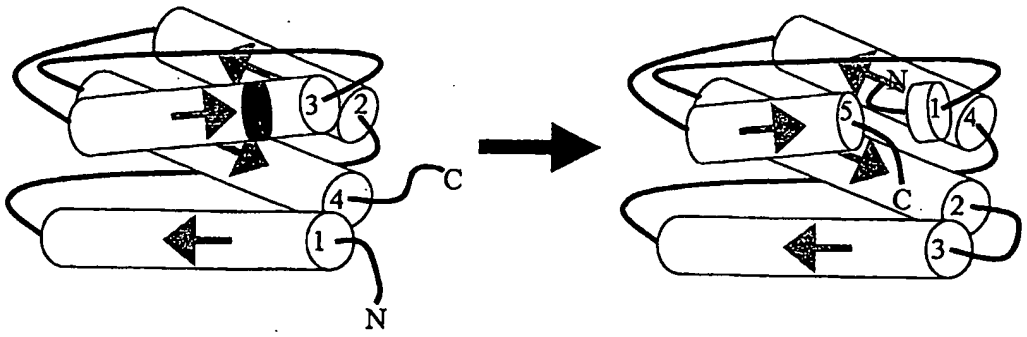


Figure 7

GH121 to GH118



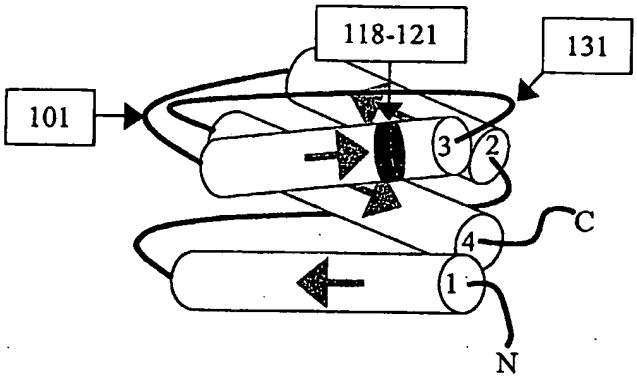


Figure 8

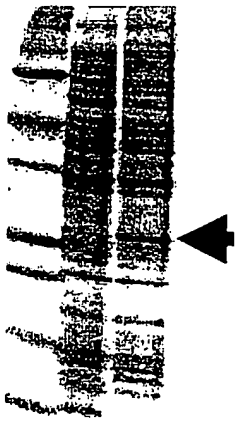


TABLE 1 9/10

Primer Name	Sequence (5' → 3')	Length
GH_CP01For	gctaggatccaacccttATCCAAACGCTGATGG	33
GH_CP01Link	tggataagggaatggtGCTGCCCTCCACAGAG	32
GH_CP01Rev	gtcaactggtcagcggccgccCTCTAGGTCCTTTAGGAG	39

TABLE 2 10/10

Primers (all 5'→3')	
Old Termini Linkers	
GHPermL01+	ctctgtggagggcagc**ACCATTCCCTTATCCA (32)**
GHPermL01-	tggataagggaatggt**GCTGCCCTCCACAGAG (32)**
GHCP01 (121→118)	
GHPermN01+	gctaggatccaacccttt**ATCCAAACGCTGATGG (33)**
GHPermC01- (39)	gtcaactggtcagcggccgcc**CTCTAGGTCCTTTAGGAG**
GHCP02 (121→119)	
GHPermN01+	gctaggatccaacccttt**ATCCAAACGCTGATGG (33)**
GHPermC02- (40)	gtcaactggtcagcggccgcc**TTCCTCTAGGTCCTTTAGG**
GHCP03 (121→120)	
GHPermN01+	gctaggatccaacccttt**ATCCAAACGCTGATGG (33)**
GHPermC03-	gtcaactggtcagcggccgcc**GCCTTCCTCTAGGTCC (37)**
GHCP04 (120→118)	
GHPermN04+	gctaggatccaacccttt**GGCATCCAAACGCTGATGG (36)**
GHPermC01- (39)	gtcaactggtcagcggccgcc**CTCTAGGTCCTTTAGGAG**
GHCP05 (120→119)	
GHPermN04+	gctaggatccaacccttt**GGCATCCAAACGCTGATGG (36)**
GHPermC02- (40)	gtcaactggtcagcggccgcc**TTCCTCTAGGTCCTTTAGG**
GHCP06 (102→100)	
GHPermN06+ (38)	gctaggatccaacccttt**GTGTACGGCGCCTCTGACAGC**
GHPermC06- (41)	gtcaactggtcagcggccgcc**GCTGTTGGCGAAGACACTCC**
GHCP07 (132→130)	
GHPermN07+	gctaggatccaacccttt**AGCCCCCGGACTGGGCAG (35)**
GHPermC07- (40)	gtcaactggtcagcggccgcc**ATCTTCCAGCCTCCCCATC**